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(FILE 'HOME' ENTERED AT 16:33:03 ON 08 JUL 2005)

FILE 'REGISTRY' ENTERED AT 16:33:10 ON 08 JUL 2005

L1 492 TKPPR/SQSP
L2 4890 ?PHOSPHOLIP?/CNS

FILE 'HCAPLUS' ENTERED AT 16:33:55 ON 08 JUL 2005

L3 274 L1
L4 59589 L2
L5 QUE PHOSPHOLIPIDS+OLD,NT/CT
L6 7858 L4-5 (L) (CONJUGAT? OR LINK? OR RACT+NT/RL)
L7 2 L3 AND L6

FILE 'HCAOLD' ENTERED AT 16:35:03 ON 08 JUL 2005

FILE 'USPATFULL, USPAT2' ENTERED AT 16:35:22 ON 08 JUL 2005

FILE 'HCAOLD' ENTERED AT 16:36:57 ON 08 JUL 2005

L8 0 L1 AND L2

=> b hcap

FILE 'HCAPLUS' ENTERED AT 16:37:29 ON 08 JUL 2005

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FILE COVERS 1907 - 8 Jul 2005 VOL 143 ISS 3

FILE LAST UPDATED: 7 Jul 2005 (20050707/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

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L7 ANSWER 1 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2002:778699 HCAPLUS
DN 137:299916
ED Entered STN: 11 Oct 2002
TI Peptide-containing compounds for targeting cells expressing NP-1 receptor
IN Von Wronski, Mathew A.; Marinelli, Edmund R.; Nunn, Adrian D.; Pillai, Radhakrishna; Ramalingam, Kondareddiar; Tweedle, Michael F.; Linder, Karen; Nanjappan, Palaniappa; Raju, Natarajan
PA USA
SO U.S. Pat. Appl. Publ., 85 pp., Cont.-in-part of U.S. Ser. No. 585,364.
CODEN: USXXCO
DT Patent
LA English
IC ICM A61K038-16
ICS A61K051-08
INCL 514008000
CC 63-6 (Pharmaceuticals)

Search done by Noble Jarrell

Section cross-reference(s): 1, 8, 34

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2002147136	A1	20021010	US 2001-871974	20010604
PRAI	US 2000-585364	A2	20000602		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2002147136	ICM	A61K038-16
	ICS	A61K051-08
	INCL	514008000
US 2002147136	NCL	514/008.000; 514/021.000; 424/001.110
	ECLA	A61K047/48R2; A61K049/00P8; A61K049/22P8; A61K049/22P4; A61K049/22P16; A61K051/08Z

OS MARPAT 137:299916

AB The present invention provides compds. for targeting endothelial cells, tumor cells or other cells that express the neuropilin-1 (NP-1) receptor, compns. containing the same and methods for their use. The compds. are of the formula A-L-B (A = a monomer, multimer or polymer of TKPPR or analog which specifically binds to NP-1 or cells expressing NP-1 with avidity equal or greater than TKPPR; L = a lipid or a non-lipid (e.g., polymer) linker; B = a substrate). Addnl., the present invention includes diagnostic, therapeutic and radiotherapeutic compns. useful for visualization, therapy or radiotherapy. For example, DPPE-glutaroyl-Gly-Thr-Lys-Pro-Pro-Arg-OH (DPPE-Glu-GTKPPR) was prepared and formulated into gas-filled microbubble compns. for ultrasonic echog. The bubbles bind to human aortic endothelial cells (HAEC) under flow. The number of bubbles bound may increase with time for several minutes at a given flow rate, up to a flow rate producing 1.53 dynes/cm², while bubbles without the targeting moiety (DPPE-Glu-GTKPPR) may not bind. However, once bound under a lesser flow rate (e.g., 1.53 dynes/cm²), the shear stress on bubbles containing DPPE-Glu-GTKPPR may be increased to 6.1 dynes/cm² without dislodging many of the bound bubbles.

ST peptide neuropilin receptor endothelium tumor targeting; antitumor angiogenesis inhibitor peptide deriv prepn; gene therapy radiotherapy peptide deriv; ultrasound imaging endothelium neuropilin peptide

IT Fusion proteins (chimeric proteins)

RL: BSU (Biological study, unclassified); BIOL (Biological study) (KDR/Fc, binding to human aortic endothelial cells inhibition by; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT Receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (NP-1 (neuropilin-1); preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT Imaging agents

(acoustic imaging contrast agents; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT Imaging

Imaging agents

(acoustic; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT Artery

(aorta, endothelium, binding to; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT Endothelium

(aortic, binding to; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT Drug delivery systems

(beads; preparation of peptide-containing compds. and compns. for targeting

- cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Diagnosis
Diagnosis
(cancer; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Nucleic acids
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(delivery of; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Angiogenesis
(detection; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Blood vessel
(endothelium; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Tumor necrosis factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(human aortic endothelial cells activated by; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Drug delivery systems
(kits; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Drug delivery systems
(liposomes; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Fluorescent substances
(markers; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Radionuclides, biological studies
RL: DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(markers; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Air
(microbubbles containing; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Alkenes, biological studies
Alkynes
Hydrocarbons, biological studies
Perfluorocarbons
Perfluorocarbons
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(microbubbles containing; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Drug delivery systems
(microbubbles; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Drug delivery systems
(microparticles; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Drug delivery systems
(microspheres, fluorescent, peptide-conjugated; preparation of peptide-containing compds. and compns. for targeting cells expressing

- neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Peptides, preparation
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (oligopeptides; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Virus
 (particles; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Angiogenesis inhibitors
 Drug delivery systems
 Drug screening
 Gene therapy
 Genetic vectors
 Human
 Imaging
 Imaging agents
 Radiopharmaceuticals
 Radiotherapy
 Reducing agents
 Sound and Ultrasound
 Viral vectors
 (preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Phospholipids, reactions
 Polymers, reactions
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Drug delivery systems
 (suspensions, gas-filled microbubbles containing; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Vascular endothelial growth factor receptors
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (type VEGFR-2, activated, inhibition of; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Endothelium
 (vascular; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT 9063-57-4, Tuftsin 127464-60-2, Vascular endothelial growth factor
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (binding to human aortic endothelial cells inhibition by; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT 14133-76-7DP, Technetium 99, complexes with tetrapeptide conjugate, biological studies 470463-90-2DP, technetium 99 complexes
 RL: DGN (Diagnostic use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (metastable; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT 124-38-9, Carbon dioxide, biological studies 2551-62-4, Sulfur hexafluoride 7439-90-9, Krypton, biological studies 7440-37-1, Argon, biological studies 7440-63-3, Xenon, biological studies 7727-37-9, Nitrogen, biological studies 7782-44-7, Oxygen, biological studies
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (microbubbles containing; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT 214210-47-6, Neuropilin-1
 RL: BSU (Biological study, unclassified); BIOL (Biological study)

(preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT 377087-52-0P, BRU 305
 RL: BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT 377087-53-1P, BRU 306
 RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
 (preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT 377087-63-3P, BRU 317 377087-82-6P, BRU 239
 377088-92-1P, BRU 337 377088-93-2P, BRU 346
 377725-24-1P, BRU 326 468726-69-4P 468729-71-7P
 470463-86-6P, BRU 292 470463-90-2P, BRU 363
 RL: DGN (Diagnostic use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT 100-46-9, Benzylamine, reactions 1155-64-2 1663-39-4, tert-Butyl acrylate 4530-20-5, Boc-glycine 5681-36-7, Dipalmitoylphosphatidylethanolamine 7672-27-7 15401-08-8 29022-11-5, Fmoc-glycine 33662-26-9 71989-26-9 71989-35-0 82911-69-1 106392-12-5, Poloxamer F 108 120791-76-6 129223-22-9 166108-71-0 167393-62-6 169543-81-1 198139-51-4 251450-64-3 283176-26-1 377087-81-5D, resin bound 377087-83-7D, resin-bound 470444-40-7, BRU 351
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT 4246-51-9P, 4,7,10-Trioxa-1,13-tridecanediamine 128988-04-5P
 150525-42-1P 377087-49-5P 377087-50-8P 377087-57-5P
 377087-58-6P 377087-59-7P 377087-60-0P 377087-62-2P
 377087-64-4P 377087-65-5P 377087-66-6P 377087-67-7P 377087-69-9P
 377087-70-2P 377087-71-3P 377087-72-4P 377087-73-5P 377087-74-6P
 377087-76-8P 377087-77-9P 377087-78-0P 377087-79-1P
 377087-80-4P 377088-94-3P 468726-65-0P 468726-66-1P
 468726-68-3P 468726-70-7P 468726-71-8P
 468726-73-0P 468726-75-2DP, resin bound 468726-77-4DP, resin-bound 468729-73-9P 468729-75-1P 468729-78-4P 470463-87-7P
 470463-88-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT 41961-58-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT 10098-91-6, Yttrium 90, biological studies 13967-64-1, Dysprosium 165, biological studies 13967-65-2, Holmium 166, biological studies 13968-53-1, Ruthenium 103, biological studies 13981-25-4, Copper 64, biological studies 13982-36-0, Yttrium 88, biological studies 14119-09-6, Gallium 67, biological studies 14265-75-9, Lutetium 177, biological studies 14378-26-8, Rhenium 188, biological studies 14913-89-4, biological studies 14998-63-1, Rhenium 186, biological studies 15750-15-9, Indium 111, biological studies 15757-14-9, Gallium 68, biological studies 15758-35-7, Ruthenium 97, biological studies 15766-00-4, Samarium 153, biological studies
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (preparation of radiolabeled peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis,

imaging, and therapy)
 IT 42074-68-0 468726-76-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (resin-bound; preparation of peptide-containing compds. and compns. for
 targeting cells expressing neuropilin-1 receptor for diagnosis,
 imaging, and therapy)
 IT 470463-90-2DP, technetium 99 complexes
 RL: RCT (Reactant); RACT (Reactant or reagent); THU
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
 (Uses)
 (metastable; preparation of peptide-containing compds. and compns. for targeting
 cells expressing neuropilin-1 receptor for diagnosis, imaging, and
 therapy)
 RN 470463-90-2 HCAPLUS
 CN L-Arginine, N-[10,18-bis(hydroxyimino)-11,11,17,17-tetramethyl-1,6-dioxo-
 15-oxa-7,12,16-triazanonadec-1-yl]glycyl-N-(2-carboxyethyl)-β-
 alanyl-glycyl-N-[3-[[2-[2-(carboxymethoxy)ethoxy]ethyl]amino]-3-oxopropyl]-
 β-alanyl[2-(2-aminoethoxy)ethoxy]acetyl-L-threonyl-L-lysyl-L-prolyl-L-
 prolyl-, (2→1')-amide with glycyl-N-[3-[[2-[2-
 (carboxymethoxy)ethoxy]ethyl]amino]-3-oxopropyl]-β-alanyl[2-(2-
 aminoethoxy)ethoxy]acetyl-L-threonyl-L-lysyl-L-prolyl-L-prolyl-L-arginine
 (2'→1'')-amide with L-threonyl-L-lysyl-L-prolyl-L-prolyl-L-
 arginine, (4→1''')-amide with L-threonyl-L-lysyl-L-prolyl-L-prolyl-
 L-arginine (9CI) (CA INDEX NAME)

*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***

L7 ANSWER 2 OF 2 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 2001:885834 HCAPLUS
 DN 136:25104
 ED Entered STN: 07 Dec 2001
 TI Peptide-containing compounds for targeting endothelial cells, compositions
 containing the same and methods for their use
 IN Von Wronski, Mathew A.; Marinelli, Edmund R.; Nunn, Adrian D.; Pillai,
 Radhakrishna; Ramalingam, Kondareddiar; Tweedle, Michael F.; Linder,
 Karen; Nanjappan, Palaniappa; Raju, Natarajan
 PA Bracco Research USA, USA
 SO PCT Int. Appl., 146 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM A61K051-00
 CC 63-6 (Pharmaceuticals)
 Section cross-reference(s): 1, 8, 9, 34, 35

FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001091805	A2	20011206	WO 2001-US18053	20010604
WO 2001091805	A3	20020906		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM			
RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG			
CA 2410887	AA	20011206	CA 2001-2410887	20010604
EP 1289565	A2	20030312	EP 2001-944270	20010604
R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR			
JP 2004500854	T2	20040115	JP 2001-587817	20010604
PRAI US 2000-585364	A2	20000602		
WO 2001-US18053	W	20010604		

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2001091805	ICM	A61K051-00
WO 2001091805	ECLA	A61K047/48R2; A61K049/00P8; A61K049/22P4; A61K049/22P8; A61K049/22P16; A61K051/08Z
JP 2004500854	FTERM	4B024/AA01; 4B024/AA20; 4B024/CA02; 4B024/DA02; 4B024/DA03; 4B024/GA11; 4B024/HA17; 4B063/QA05; 4B063/QQ21; 4B063/QQ41; 4B063/QQ61; 4B063/QQ89; 4B063/QQ91; 4B063/QR51; 4B063/QR59; 4B063/QR77; 4B063/QS31; 4B063/QS36; 4B063/QS39; 4B063/QX01; 4B063/QX10; 4B065/AA90X; 4B065/AA93X; 4B065/AB01; 4B065/AB10; 4B065/AC14; 4B065/BA02; 4B065/BA30; 4B065/CA24; 4B065/CA43; 4B065/CA44; 4B065/CA46; 4C076/CC27; 4C076/DD41; 4C076/DD44; 4C076/DD45; 4C076/DD46; 4C076/DD51; 4C076/DD52; 4C076/DD59; 4C076/DD63; 4C076/DD68; 4C076/DD69; 4C076/DD70; 4C076/EE06; 4C076/EE30; 4C076/EE59; 4C084/AA02; 4C084/AA12; 4C084/BA17; 4C084/BA18; 4C084/BA42; 4C084/DA03; 4C084/NA14; 4C084/ZB26; 4H045/AA10; 4H045/AA20; 4H045/BA13; 4H045/BA50; 4H045/BA55; 4H045/EA20; 4H045/EA50; 4H045/FA31; 4H045/FA41; 4H045/FA50; 4H045/FA58
OS	MARPAT 136:25104	
AB	The present invention provides compds. for targeting endothelial cells, tumor cells or other cells that express the neuropilin-1 (NP-1) receptor, compns. containing the same and methods for their use. The compds. are of the formula A-L-B (A = TKPPR or analog which specifically binds to an endothelial cell or cells that express markers in common with endothelial cells, with equal or greater avidity as TKPPR; L = a lipid or a non-lipid (polymer) linker; B = a substrate). Addnl., the present invention includes diagnostic, therapeutic and radiotherapeutic compns. useful for visualization, therapy or radiotherapy. For example, DPPE-glutaroyl-Gly-Thr-Lys-Pro-Pro-Arg-OH (DPPE-Glu-GTKPPR) was prepared and formulated into gas-filled microbubble compns. for ultrasonic echog. The bubbles interact with a VEGF receptor on human aortic endothelial cells (HAEC), possibly with KDR receptor, or more likely with NP-1 receptor which binds to KDR.	
ST	peptide neuropilin receptor endothelium targeting diagnosis therapy; antitumor angiogenesis inhibitor peptide deriv prepn; gene therapy radiotherapy peptide deriv; ultrasound imaging endothelium neuropilin peptide	
IT	Imaging agents (acoustic imaging contrast agents; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)	
IT	Imaging (acoustic; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)	
IT	Artery (aorta, endothelium; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)	
IT	Endothelium (aortic; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)	
IT	Drug delivery systems (beads; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)	
IT	Diagnosis Diagnosis (cancer; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)	
IT	Antitumor agents	

- (carcinoma, epidermoid; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT Polyoxyalkylenes, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(derivs.; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT Angiogenesis
(detection; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT Diglycerides
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(digalactosyl; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT Cell activation
(endothelial; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT Blood vessel
Blood vessel
(endothelium; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT Fatty acids, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(esters, with lipids; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT Sterols
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(esters, with sugar acids; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT Lipids, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(ether-linked, with fatty acids; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT Vascular endothelial growth factor receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(interaction with; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT Drug delivery systems
(liposomes; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT Alcohols, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(long-chain; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT Fluorescent substances
(markers; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT Radionuclides, biological studies
RL: DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(markers; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT Drug delivery systems

- (microbubbles, gas-filled; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT Drug delivery systems
(microspheres; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT Liposomes
Surfactants
(nonionic; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT Peptides, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(oligopeptides; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT Phosphoproteins
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(phosphotyrosine-containing, phosphorylation; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT Air
Angiogenesis inhibitors
Animal
Antitumor agents
Diagnosis
Drug delivery systems
Drug delivery systems
Gene therapy
Genetic vectors
Human
Imaging
Imaging agents
Radiopharmaceuticals
Radiotherapy
Reducing agents
Retroviral vectors
Sound and Ultrasound
Viral vectors
(preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT Alkenes, biological studies
Alkynes
Cardiolipins
Ceramides
Fatty acids, biological studies
Glycolipids
Glycosphingolipids
Hydrocarbons, biological studies
Lipids, biological studies
Lipopolysaccharides
Lysophospholipids
Nucleic acids
Perfluorocarbons
Perfluorocarbons
Phosphatidic acids
Phosphatidylinositols
Phospholipids, biological studies
Polymers, biological studies
Saponins
Sphingolipids
Sulfatides
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)

- IT Phosphorylation, biological
(protein, protein tyrosines; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT Carbohydrates, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(sugar esters, with aliphatic acids; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT Drug delivery systems
(suspensions; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT Vascular endothelial growth factor receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type VEGFR-2, interaction with; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT Endothelium
Endothelium
(vascular; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT 127464-60-2, Vascular endothelial growth factor
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(binding to neuropilin-1 and KDR receptors; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT 14133-76-7DP, Technetium 99, complexes with tetrapeptide conjugate, biological studies
RL: DGN (Diagnostic use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(metastable; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT 56-12-2, γ -Aminobutyric acid, biological studies 56-40-6, Glycine, biological studies 56-84-8, L-Aspartic acid, biological studies 56-86-0, L-Glutamic acid, biological studies 1197-18-8, trans-4-Aminomethylcyclohexanecarboxylic acid 9063-57-4, Tuftsin 214210-47-6, Neuropilin-1
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT 41961-58-4DP, conjugates with red fluorescent carboxylate-modified FluoSphere 145018-54-8DP, FluoSphere, red fluorescent carboxylate-modified, conjugates with peptide
RL: BSU (Biological study, unclassified); DGN (Diagnostic use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT 41961-58-4P
RL: BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
(preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT 377087-37-1P 377087-53-1P 377087-54-2P 377087-63-3P 377087-82-6P 377088-92-1P 377088-93-2P 377725-24-1P 377725-30-9P
RL: DGN (Diagnostic use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)
- IT 56-87-1, L-Lysine, reactions 72-19-5, L-Threonine, reactions 108-55-4, Glutaric anhydride 1155-64-2 1663-39-4, tert-Butyl acrylate

2149-70-4 4530-20-5 7672-27-7 15260-10-3 15401-08-8 15401-08-8
 29022-11-5 71989-26-9 71989-35-0 129223-22-9 135821-02-2
 166108-71-0 167393-62-6 169543-81-1 195136-58-4 377087-58-6
 377087-61-1 377087-81-5 377087-84-8

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)

IT 128988-04-5P 198139-51-4P 377087-43-9P 377087-44-0P
 377087-45-1P 377087-46-2P 377087-47-3P 377087-48-4P
 377087-49-5P 377087-50-8P 377087-51-9P
 377087-52-0P 377087-55-3P 377087-56-4P
 377087-57-5P 377087-59-7P 377087-60-0P 377087-62-2P
 377087-64-4P 377087-65-5P 377087-66-6P 377087-67-7P 377087-68-8P
 377087-69-9P 377087-70-2P 377087-71-3P 377087-72-4P 377087-73-5P
 377087-74-6P 377087-75-7P 377087-76-8P 377087-77-9P
 377087-78-0P 377087-79-1P 377087-80-4P
 377088-94-3P 377725-26-3P 377725-28-5P 377725-29-6P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)

IT 2462-63-7 5681-36-7, Dipalmitoylphosphatidylethanolamine
 106392-12-5, Ethylene oxide-propylene oxide block copolymer

RL: RCT (Reactant); THU (Therapeutic use); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)

(preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)

IT 56-81-5, Glycerol, biological studies 56-81-5D, Glycerol, esters
 57-88-5, Cholesterol, biological studies 110-15-6, Succinic acid,
 biological studies 110-94-1, Glutaric acid 124-30-1, Stearylamine
 124-38-9, Carbon dioxide, biological studies 141-82-2, Malonic acid,
 biological studies 144-62-7, Oxalic acid, biological studies 538-24-9,
 Glycerol trilaurate 1256-86-6, Cholesterol sulfate 1510-21-0,
 Cholesterol hemisuccinate 2197-63-9, Dicityl phosphate 2551-62-4,
 Sulfur hexafluoride 3614-36-6, Diacetyl phosphate 4345-03-3
 4537-76-2, Distearoylphosphatidylethanolamine 7439-90-9, Krypton,
 biological studies 7440-37-1, Argon, biological studies 7440-63-3,
 Xenon, biological studies 7727-37-9, Nitrogen, biological studies
 7782-44-7, Oxygen, biological studies 9002-89-5, Polyvinyl alcohol
 9004-54-0D, Dextran, derivs. 10098-91-6, Yttrium-90, biological studies
 13967-64-1, Dysprosium-165, biological studies 13967-65-2, Holmium-166,
 biological studies 13968-53-1, Ruthenium-103, biological studies
 13981-25-4, Copper-64, biological studies 13982-36-0, Yttrium-88,
 biological studies 14119-09-6, Gallium-67, biological studies
 14133-76-7, Technetium-99, biological studies 14265-75-9, Lutetium-177,
 biological studies 14378-26-8, Rhenium-188, biological studies
 14913-89-4, biological studies 14998-63-1, Rhenium-186, biological
 studies 15750-15-9, Indium-111, biological studies 15757-14-9,
 Gallium-68, biological studies 15758-35-7, Ruthenium-97, biological
 studies 15766-00-4, Samarium-153, biological studies 20255-95-2,
 Dimyristoylphosphatidylethanolamine 24529-88-2 25322-68-3D,
 Polyethylene glycol, derivs. 26657-95-4, Glycerol dipalmitate
 27638-00-2, Glycerol dilaurate 55252-82-9 68354-92-7 73294-85-6
 76822-97-4 78543-25-6, 1-Hexadecyl-2-palmitoylglycerophosphoethanolamine
 83554-62-5 87136-19-4 108032-13-9 161293-59-0 161441-83-4
 186198-32-3 377088-91-0

RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)

IT 4246-51-9, 4,7,10-Trioxa-1,13-tridecanediamine 377087-83-7

RL: RCT (Reactant); RACT (Reactant or reagent)

(support-bound; preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)

IT 41961-58-4DP, conjugates with red fluorescent carboxylate-modified FluoSphere

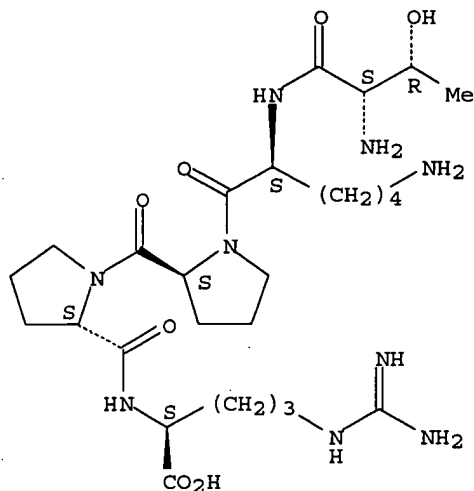
RL: RCT (Reactant); DGN (Diagnostic use); SPN (Synthetic preparation); RACT (Reactant or reagent); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of peptide-containing compds. and compns. for targeting endothelial cells expressing neuropilin-1 receptor for diagnosis and therapy)

RN 41961-58-4 HCAPLUS

CN L-Arginine, L-threonyl-L-lysyl-L-prolyl-L-prolyl- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



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103 SEA L2

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L1 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2005 ACS on STN
AN 2002:778699 HCAPLUS
DN 137:299916
ED Entered STN: 11 Oct 2002
TI Peptide-containing compounds for targeting cells expressing NP-1 receptor
IN Von Wronski, Mathew A.; Marinelli, Edmund R.; Nunn, Adrian D.; Pillai, Radhakrishna; Ramalingam, Kondareddiar; Tweedle, Michael F.; Linder, Karen; Nanjappan, Palaniappa; Raju, Natarajan
PA USA
SO U.S. Pat. Appl. Publ., 85 pp., Cont.-in-part of U.S. Ser. No. 585,364.
CODEN: USXXCO
DT Patent
LA English
IC ICM A61K038-16
ICS A61K051-08
INCL 514008000
CC 63-6 (Pharmaceuticals)
Section cross-reference(s): 1, 8, 34
FAN.CNT 2

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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Search done by Noble Jarrell

PI US 2002147136 A1 20021010 US 2001-871974 20010604 <--
 PRAI US 2000-585364 A2 20000602

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
US 2002147136	ICM	A61K038-16
	ICS	A61K051-08
	INCL	514008000
US 2002147136	NCL	514/008.000; 514/021.000; 424/001.110
	ECLA	A61K047/48R2; A61K049/00P8; A61K049/22P8; A61K049/22P4; A61K049/22P16; A61K051/08Z

OS MARPAT 137:299916

AB The present invention provides compds. for targeting endothelial cells, tumor cells or other cells that express the neuropilin-1 (NP-1) receptor, compns. containing the same and methods for their use. The compds. are of the formula A-L-B (A = a monomer, multimer or polymer of TKPPR or analog which specifically binds to NP-1 or cells expressing NP-1 with avidity equal or greater than TKPPR; L = a lipid or a non-lipid (e.g., polymer) linker; B = a substrate). Addnl., the present invention includes diagnostic, therapeutic and radiotherapeutic compns. useful for visualization, therapy or radiotherapy. For example, DPPE-glutaroyl-Gly-Thr-Lys-Pro-Pro-Arg-OH (DPPE-Glu-GTKPPR) was prepared and formulated into gas-filled microbubble compns. for ultrasonic echog. The bubbles bind to human aortic endothelial cells (HAEC) under flow. The number of bubbles bound may increase with time for several minutes at a given flow rate, up to a flow rate producing 1.53 dynes/cm², while bubbles without the targeting moiety (DPPE-Glu-GTKPPR) may not bind. However, once bound under a lesser flow rate (e.g., 1.53 dynes/cm²), the shear stress on bubbles containing DPPE-Glu-GTKPPR may be increased to 6.1 dynes/cm² without dislodging many of the bound bubbles.

ST peptide neuropilin receptor endothelium tumor targeting; antitumor angiogenesis inhibitor peptide deriv prepn; gene therapy radiotherapy peptide deriv; ultrasound imaging endothelium neuropilin peptide

IT Fusion proteins (chimeric proteins)

RL: BSU (Biological study, unclassified); BIOL (Biological study) (KDR/Fc, binding to human aortic endothelial cells inhibition by; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT Receptors

RL: BSU (Biological study, unclassified); BIOL (Biological study) (NP-1 (neuropilin-1); preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT Imaging agents

(acoustic imaging contrast agents; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT Imaging

Imaging agents

(acoustic; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT Artery

(aorta, endothelium, binding to; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT Endothelium

(aortic, binding to; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT Drug delivery systems

(beads; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT Diagnosis

Diagnosis

- (cancer; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Nucleic acids
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(delivery of; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Angiogenesis
(detection; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Blood vessel
(endothelium; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Tumor necrosis factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(human aortic endothelial cells activated by; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Drug delivery systems
(kits; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Drug delivery systems
(liposomes; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Fluorescent substances
(markers; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Radionuclides, biological studies
RL: DGN (Diagnostic use); THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(markers; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Air
(microbubbles containing; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Alkenes, biological studies
Alkynes
Hydrocarbons, biological studies
Perfluorocarbons
Perfluorocarbons
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(microbubbles containing; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Drug delivery systems
(microbubbles; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Drug delivery systems
(microparticles; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Drug delivery systems
(microspheres, fluorescent, peptide-conjugated; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Peptides, preparation
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

- (oligopeptides; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Virus
(particles; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Angiogenesis inhibitors
Drug delivery systems
Drug screening
Gene therapy
Genetic vectors
Human
Imaging
Imaging agents
Radiopharmaceuticals
Radiotherapy
Reducing agents
Sound and Ultrasound
Viral vectors
(preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Phospholipids, reactions
Polymers, reactions
RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Drug delivery systems
(suspensions, gas-filled microbubbles containing; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Vascular endothelial growth factor receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(type VEGFR-2, activated, inhibition of; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT Endothelium
(vascular; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT 9063-57-4, Tuftsin 127464-60-2, Vascular endothelial growth factor
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(binding to human aortic endothelial cells inhibition by; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT 14133-76-7DP, Technetium 99, complexes with tetrapeptide conjugate, biological studies 470463-90-2DP, technetium 99 complexes
RL: DGN (Diagnostic use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(metastable; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT 124-38-9, Carbon dioxide, biological studies 2551-62-4, Sulfur hexafluoride 7439-90-9, Krypton, biological studies 7440-37-1, Argon, biological studies 7440-63-3, Xenon, biological studies 7727-37-9, Nitrogen, biological studies 7782-44-7, Oxygen, biological studies
RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
(microbubbles containing; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT 214210-47-6, Neuropilin-1
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)
- IT 377087-52-OP, BRU 305
RL: BSU (Biological study, unclassified); RCT (Reactant); SPN (Synthetic

preparation); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT 377087-53-1P, BRU 306
 RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)
 (preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT 377087-63-3P, BRU 317 377087-82-6P, BRU 239 377088-92-1P, BRU 337
 377088-93-2P, BRU 346 377725-24-1P, BRU 326 468726-69-4P
 468729-71-7P 470463-86-6P, BRU 292 470463-90-2P, BRU 363
 RL: DGN (Diagnostic use); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
 (preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT 100-46-9, Benzylamine, reactions 1155-64-2 1663-39-4, tert-Butyl acrylate 4530-20-5, Boc-glycine 5681-36-7, Dipalmitoylphosphatidylethanolamine 7672-27-7 15401-08-8 29022-11-5, Fmoc-glycine 33662-26-9 71989-26-9 71989-35-0 82911-69-1 106392-12-5, Poloxamer F 108 120791-76-6 129223-22-9 166108-71-0 167393-62-6 169543-81-1 198139-51-4 251450-64-3 283176-26-1 377087-81-5D, resin bound 377087-83-7D, resin-bound 470444-40-7, BRU 351
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT 4246-51-9P, 4,7,10-Trioxa-1,13-tridecanediamine 128988-04-5P
 150525-42-1P 377087-49-5P 377087-50-8P 377087-57-5P 377087-58-6P
 377087-59-7P 377087-60-0P 377087-62-2P 377087-64-4P 377087-65-5P
 377087-66-6P 377087-67-7P 377087-69-9P 377087-70-2P 377087-71-3P
 377087-72-4P 377087-73-5P 377087-74-6P 377087-76-8P 377087-77-9P
 377087-78-0P 377087-79-1P 377087-80-4P 377088-94-3P 468726-65-0P
 468726-66-1P 468726-68-3P 468726-70-7P 468726-71-8P 468726-73-0P
 468726-75-2DP, resin bound 468726-77-4DP, resin-bound 468729-73-9P
 468729-75-1P 468729-78-4P 470463-87-7P 470463-88-8P
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
 (preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT 41961-58-4P
 RL: RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
 (preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT 10098-91-6, Yttrium 90, biological studies 13967-64-1, Dysprosium 165, biological studies 13967-65-2, Holmium 166, biological studies 13968-53-1, Ruthenium 103, biological studies 13981-25-4, Copper 64, biological studies 13982-36-0, Yttrium 88, biological studies 14119-09-6, Gallium 67, biological studies 14265-75-9, Lutetium 177, biological studies 14378-26-8, Rhenium 188, biological studies 14913-89-4, biological studies 14998-63-1, Rhenium 186, biological studies 15750-15-9, Indium 111, biological studies 15757-14-9, Gallium 68, biological studies 15758-35-7, Ruthenium 97, biological studies 15766-00-4, Samarium 153, biological studies
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)
 (preparation of radiolabeled peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

IT 42074-68-0 468726-76-3
 RL: RCT (Reactant); RACT (Reactant or reagent)
 (resin-bound; preparation of peptide-containing compds. and compns. for targeting cells expressing neuropilin-1 receptor for diagnosis, imaging, and therapy)

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FOR DETAILS. <<<

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L4 ANSWER 1 OF 1 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN
AN 2003-800817 [75] WPIX
CR 2002-195523 [25]
DNC C2003-221021
TI Composition used in targeting endothelial cells e.g. tumor cells comprises
compounds containing monomers, multimers or polymers of
L-arginine-L-threonyl-L-lysyl-L-prolyl-L-prolyl.
DC A96 B04 K08
IN LINDER, K; MARINELLI, E R; NANJAPPAN, P; NUNN, A D; PILLAI, R; RAJU, N;
RAMALINGAM, K; TWEEDLE, M F; VON WRONSKI, M A
PA (LIND-I) LINDER K; (MARI-I) MARINELLI E R; (NANJ-I) NANJAPPAN P; (NUNN-I)
NUNN A D; (PILL-I) PILLAI R; (RAJU-I) RAJU N; (RAMA-I) RAMALINGAM K;
(TWEI-I) TWEEDLE M F; (VWRO-I) VON WRONSKI M A
CYC 1
PI US 2002147136 A1 20021010 (200375)* 85 A61K038-16 <--
ADT US 2002147136 A1 CIP of US 2000-585364 20000602, US 2001-871974 20010604
PRAI US 2001-871974 20010604; US 2000-585364 20000602
IC ICM A61K038-16
ICS A61K051-08
AB US2002147136 A UPAB: 20031120
NOVELTY - Composition (A1) comprises compounds containing monomers,
multimers or polymers of L-arginine-L-threonyl-L-lysyl-L-prolyl-L-prolyl.
DETAILED DESCRIPTION - Composition (A1) comprises a compound
containing monomers, multimers or polymers of L-arginine-L-threonyl-L-
lysyl-L-prolyl-L-prolyl (TKPPR) of formula A-L-B1 (I).
A = monomer, multimer or polymer of TKPPR or its analogue that
specifically binds to NP-1 or cells that express NP-1 with avidity of at
least that of TKPPR;
L = a linker (preferably a group of formula (i));
X = NH, NR, O, S or SR;
m = 0-2;
n = 0-4;
R = H or 1-4C alkyl (optionally substituted by at least one OH), and

B1 = a substrate.

INDEPENDENT CLAIMS are also included for:

- (1) a compound of formula A-L-B1a (II) and A-L-B3 (III) for use in targeting endothelial cells, tumor cells or other cells;
 - (2) an ultrasound contrast agent (c1) comprising a suspension of gas filled microbubbles comprising (II);
 - (3) an ultrasound contrast agent (c2) comprising a suspension of gas filled microballoons comprising (III);
 - (4) preparation of (I) which comprises conjugating the monomer, multimer or polymer of TKPRR or its analogue with a linker to obtain a compound of formula A-L (IV), forming a covalent or non-covalent bond between (IV) and the substrate B1 or forming a covalent bond between B1 and the linker to form a conjugate B-L followed by conjugation with the monomer, and
 - (5) a kit for preparing a radiopharmaceutical comprising (A1).
- B1a = a phospholipid group of formula (ii);
 M = alkaline or alkaline earth metal cation;
 R1, R2 = 12-20C linear chain optionally interrupted by CO or O, and
 X2 = H, CH₂CH₂NH₂, CH₂CH(NH₃⁺)-COO⁻, CH₂CH(OH)CH₂OH or a group of formula (iii).

ACTIVITY - Cytostatic; Antiangiogenetic.

MECHANISM OF ACTION - Vascular endothelial growth factor binding receptor transmembrane glycoprotein (NP-1) binder.

USE - Used for targeting endothelial cells, tumor cells or other cells which express NP-1, for inhibiting angiogenesis, for ultrasound imaging, staging a tumor, screening at least one targeted ultrasound contrast agent for the ability to target endothelial cells, tumor cells or other cells which express NP-1, for the therapeutic delivery in vivo of a bioactive agent and for delivering desired nucleic acids to endothelial cells, tumor cells or other cells which express NP-1 (all claimed). The composition is also useful for visualization therapy or radiotherapy of endothelial cells.

ADVANTAGE - (A1) can be used with or without a detectable moiety for any of the imaging modalities.

Dwg.0/4

FS CPI

FA AB; GI; DCN

MC CPI: A12-V01; A12-V03C2; B01-D02; B03-H; B04-B01B; B04-C01A; B04-C02; B04-C03; B04-D01; B04-J02; B05-A03B; B05-A04; B05-B01P; B05-B02C; B05-C08; B10-A07; B10-B02J; B10-B04B; B10-C02; B10-H02B; B12-K04C1; B14-F01D; B14-H01; K08-X; K09-B; K09-E

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L4 ANSWER 1 OF 1 WPIX COPYRIGHT 2005 THE THOMSON CORP on STN

M1 *31* DCN: 0097-34702-T; 0097-34702-M; 0097-34702-N
 M1 *32* DCN: 0097-34701-T; 0097-34701-M; 0097-34701-N
 M1 *37* DCN: RA01EA-K; RA01EA-T; RA01EA-Q; RA01EA-M
 M1 *38* DCN: R16461-K; R16461-T; R16461-Q; R16461-M
 M1 *39* DCN: RA0120-K; RA0120-T; RA0120-Q; RA0120-M
 M1 *40* DCN: RA01IK-K; RA01IK-T; RA01IK-Q; RA01IK-M
 M1 *41* DCN: RA01PM-K; RA01PM-T; RA01PM-Q; RA01PM-M
 M1 *42* DCN: RA00I9-K; RA00I9-T; RA00I9-Q; RA00I9-M
 M1 *43* DCN: RA0121-K; RA0121-T; RA0121-Q; RA0121-M
 M1 *44* DCN: RA04V6-K; RA04V6-T; RA04V6-Q; RA04V6-M
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 M1 *47* DCN: 0097-34703-K; 0097-34703-T; 0097-34703-Q; 0097-34703-M; 0097-34703-P
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 M2 *02* DCN: R06891-K; R06891-T; R06891-Q; R06891-M
 M2 *03* DCN: R07812-K; R07812-T; R07812-Q; R07812-M
 M2 *04* DCN: R09617-K; R09617-T; R09617-Q; R09617-M; R10728-K; R10728-T; R10728-Q; R10728-M
 M2 *05* DCN: R01065-K; R01065-T; R01065-Q; R01065-M
 M2 *06* DCN: RA0ICL-K; RA0ICL-T; RA0ICL-Q; RA0ICL-M

M2 *07* DCN: RA11FY-K; RA11FY-T; RA11FY-Q; RA11FY-M
M2 *08* DCN: RA1AGG-K; RA1AGG-T; RA1AGG-Q; RA1AGG-M
M2 *09* DCN: RA0K4Y-K; RA0K4Y-T; RA0K4Y-Q; RA0K4Y-M
M2 *10* DCN: R00104-K; R00104-T; R00104-Q; R00104-M; R04091-K; R04091-T;
R04091-Q; R04091-M; R13229-K; R13229-T; R13229-Q; R13229-M
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M2 *12* DCN: R00114-K; R00114-T; R00114-Q; R00114-M; R04738-K; R04738-T;
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M2 *13* DCN: R00100-K; R00100-T; R00100-Q; R00100-M; R17997-K; R17997-T;
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M2 *14* DCN: R06639-K; R06639-T; R06639-Q; R06639-M
M2 *15* DCN: R00900-K; R00900-T; R00900-Q; R00900-M; R07861-K; R07861-T;
R07861-Q; R07861-M
M2 *16* DCN: R01137-K; R01137-T; R01137-Q; R01137-M; R12109-K; R12109-T;
R12109-Q; R12109-M
M2 *17* DCN: R01152-K; R01152-T; R01152-Q; R01152-M; R07021-K; R07021-T;
R07021-Q; R07021-M
M2 *18* DCN: R08480-K; R08480-T; R08480-Q; R08480-M
M2 *19* DCN: R10312-K; R10312-T; R10312-Q; R10312-M
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M2 *25* DCN: R03186-K; R03186-T; R03186-Q; R03186-M
M2 *26* DCN: R03134-K; R03134-T; R03134-Q; R03134-M
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M2 *29* DCN: R18066-K; R18066-T; R18066-Q; R18066-M
M2 *30* DCN: RAAXL7-K; RAAXL7-T; RAAXL7-Q; RAAXL7-M
M5 *33* DCN: R11954-K; R11954-T; R11954-Q; R11954-M
M5 *34* DCN: R13257-K; R13257-T; R13257-Q; R13257-M
M5 *35* DCN: R00148-K; R00148-T; R00148-Q; R00148-M
M5 *36* DCN: RAAXKP-K; RAAXKP-T; RAAXKP-Q; RAAXKP-M

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